

IN THE CLAIMS

Claims 1-20. (Cancelled)

Claim 21. (New) A method of allocating processing capacity of system processing units in an extranet gateway, the method comprising the steps of:

establishing a first initial expected available bandwidth of a first of the system processing units;

establishing a second initial expected available bandwidth of a second of the system processing units; and

assigning a Virtual Private Network (VPN) tunnel to one of the first and second system processing units for processing according to estimated current available bandwidths of the first and second system processing units, the current available bandwidths being estimated by assessing the initial expected available bandwidths for each system processing unit and decremented the initial expected available bandwidth of each system processing unit by other processing requirements assigned to that respective system processing unit;

wherein the highest current available bandwidth is based on an absolute bandwidth capacity basis, the absolute bandwidth being calculated by determining which system processing unit has the largest amount of estimated current available bandwidth.

Claim 22. (New) The method of claim 21, wherein the first initial expected available bandwidth is established by determining whether the first SPU is an accelerator or a CPU.

Claim 23. (New) The method of claim 22, wherein if the first system processing unit is an accelerator, the step of establishing the first initial expected available bandwidth comprises determining a type of accelerator and obtaining expected available bandwidth information for that type of accelerator from an initial expected bandwidth table.

Claim 24. (New) The method of claim 22, wherein if the first system processing unit is a CPU, the step of establishing the first initial expected available bandwidth comprises determining a

type of CPU and CPU speed, obtaining a first conversion factor for the type of CPU, and multiplying the conversion factor with the CPU speed.

Claim 25. (New) The method of claim 24, wherein the first conversion factor is based on an amount of bandwidth passable by that processor type per unit CPU speed.

Claim 26. (New) The method of claim 21, wherein the other processing requirements of a system processing unit comprise:

- overhead processing requirements assigned to that SPU; and
- processing requirements associated with other VPN tunnels already assigned to that system processing unit.

Claim 27. (New) The method of claim 26, wherein the processing requirements associated with other VPN tunnels assigned to that system processing unit comprise encryption and decryption processing requirements for the other VPN tunnels

Claim 28. (New) The method of claim 26, wherein the other processing requirements of a system processing unit further comprise processing requirements associated with other VPN tunnels assigned to other system processing units

Claim 29. (New) The method of claim 26, wherein the actual load on the other VPN tunnels assigned to the system processing unit is not monitored or used in connection with estimating the current available bandwidth of the SPU.

Claim 30. (New) A method of allocating processing capacity of system processing units in an extranet gateway, the method comprising the steps of:

- establishing a first initial expected available bandwidth of a first of the system processing units;
- establishing a second initial expected available bandwidth of a second of the system processing units; and

assigning a Virtual Private Network (VPN) tunnel to one of the first and second system processing units for processing by assessing current available bandwidths of the first and second system processing units, the current available bandwidths being determined by assessing the initial expected available bandwidth for that system processing unit as decremented by other processing requirements for that system processing unit;

wherein the highest current available bandwidth is based on a relative bandwidth capacity basis, the relative bandwidth being calculated by determining which SPU has the highest percentage of available capacity.

Claim 31. (New) The method of claim 30, wherein the first initial expected available bandwidth is established by determining whether the first SPU is an accelerator or a CPU.

Claim 32. (New) The method of claim 31, wherein if the first system processing unit is an accelerator, the step of establishing the first initial expected available bandwidth comprises determining a type of accelerator and obtaining expected available bandwidth information for that type of accelerator from an initial expected bandwidth table.

Claim 33. (New) The method of claim 31, wherein if the first system processing unit is a CPU, the step of establishing the first initial expected available bandwidth comprises determining a type of CPU and CPU speed, obtaining a first conversion factor for the type of CPU, and multiplying the conversion factor with the CPU speed.

Claim 34. (New) The method of claim 33, wherein the first conversion factor is based on an amount of bandwidth passable by that processor type per unit CPU speed.

Claim 35. (New) The method of claim 30, wherein the other processing requirements of a system processing unit comprise:

overhead processing requirements assigned to that SPU; and
processing requirements associated with other VPN tunnels already assigned to that system processing unit.

Claim 36. (New) The method of claim 35, wherein the processing requirements associated with other VPN tunnels assigned to that system processing unit comprise encryption and de-encryption processing requirements for the other VPN tunnels

Claim 37. (New) The method of claim 35, wherein the other processing requirements of a system processing unit further comprise processing requirements associated with other VPN tunnels assigned to other system processing units

Claim 38. (New) The method of claim 35, wherein the actual load on the other VPN tunnels assigned to the system processing unit is not monitored or used in connection with estimating the current available bandwidth of the SPU.

Claim 39. (New) A method of allocating processing capacity of system processing units in an extranet gateway, the method comprising the steps of:

- establishing a first initial expected available bandwidth of a first of the system processing units;

- establishing a second initial expected available bandwidth of a second of the system processing units; and

- assigning a Virtual Private Network (VPN) tunnel to one of the first and second system processing units for processing according to tunnel type, by preferentially assigning VPN tunnels to SPUs that can most efficiently process that type of tunnel.

Claim 40. (New) The method of claim 39, wherein the step of assigning the VPN tunnel to one of the first and second system processing units for processing according to tunnel type comprises:

- determining whether the tunnel is a compressed tunnel or an uncompressed tunnel;

- if the tunnel is a compressed tunnel, assigning the tunnel to a SPU that can more efficiently process compressed tunnels; and

- if the tunnel is an uncompressed tunnel, assigning the tunnel to a SPU that is not as efficient at processing compressed tunnels.